

What are the risks associated with climate change and what should we be doing about it?

Climate change has been apparent and primarily driven by anthropogenic causes such as burning fossil fuels, deforestation, and farming livestock. Climate change poses a grave threat to our planet and its inhabitants. The consequences of climate change will affect everyone from Birmingham, England to Berkeley, California to Bele Horizonte, Brazil to Brisbane, Australia. It also affects communities, ecosystems, economies, and societies worldwide. This essay will examine the risks associated with climate change and will explore possible solutions to mitigate its impact on our planet and how we can protect it for future generations.

One of the most alarming threats of climate change and one that we have experienced is the rise in global temperatures. This warming trend has contributed to many obscene weather events such as extreme and frequent heatwaves, droughts, and wildfires. All these events have allowed for global surface temperatures to be 1.1 degrees higher than during the preindustrial era. (Mooney and Hodgson, 2023). Rising temperatures have caused many economic and social impacts such as crop loss, habitat damage, increased human health risks and increased migration. (Chmielewski, 2022). Climate change has seen an escalation in the melting of polar ice caps and glaciers which leads to sea levels rising at a very sudden rate. This phenomenon has resulted in harming many coastal communities leading to a lot of flooding events and erosion. Small islands are particularly vulnerable, facing the risk of becoming inhabitable due to the encroaching sea. A prime example of this can be seen in the Maldives, as it is one of the lowest lying nations in the world, sea level rise caused by global climate change is an existential threat to the island nation. At the current rate of global warming, almost 80% of the Maldives could become uninhabitable by 2050. (Manzo et al., 2021). Biodiversity loss on Earth is becoming prevalent as climate change disrupts habitats and ecosystems, causing aggravation to many animal and plant species across the world. The loss of biodiversity not only diminishes our planet's natural beauty, but also makes animals everyone knows and adores become endangered such as polar bears, snow leopards and green sea turtles. A comprehensive study by the WWF revealed that the global wildlife populations have plummeted by 69% on average since 1970. (WWF, 2022). This is obviously partly down to the impact that climate change is having on our planet. Ocean acidification refers to a reduction in the pH of the ocean over an extended period of time, (National Oceanic and Atmospheric Administration, 2021), caused by increased carbon sequestration. Acidic water harms marine life, particularly organisms with calcium carbonate shells or skeletons, such as corals and shellfish. This jeopardizes marine ecosystems and the livelihoods of communities dependent on fisheries. Finally, climate change intensifies the frequency and severity of hurricanes, typhoons, and heavy rainfall events. These events can cause devastating flooding, landslides, and infrastructure damage. Recent disasters such as typhoon Haiyan which made landfall on the Philippines on Nov. 8, 2013, as a Category 5 storm. The typhoon's fury affected more than 14 million people across 44 provinces, displacing 4.1 million people, killing more than 6,000 people and leaving 1,800 missing. In addition, Typhoon Haiyan damaged 1.1 million houses, destroyed 33 million coconut trees (a major source of livelihoods), and disrupted the livelihoods of 5.9 million workers. (Reid, 2019). That was just one of the many vulnerable communities that are facing challenges in rebuilding their country whilst adapting to these ruthless and brutal climate realities.

However, mitigation plans have been put in place to act against climate change. These include transitioning to renewable energy sources such as solar, wind, tidal and hydroelectric. Investment across the world in these renewable energy strategies can significantly reduce greenhouse gas emissions. Many companies have committed to "net zero" targets, resolving to reduce their carbon emissions and offset the impact of those they cannot cut, by investing in schemes to remove CO₂

from the atmosphere. (Cookson, 2022). Addressing climate change requires global cooperation. International agreements, such as the Paris Agreement, signed in 2015 where 196 nations pledged to strive to limit warming to 1.5C. (Hodgson and Campbell, 2023). Countries must collaborate to set and achieve ambitious emission reduction targets, share knowledge, and support vulnerable nations in adapting to climate change. The last mitigation strategy is raising awareness about climate change and its consequences. Education is one of the most empowering ways for individuals to make sustainable and thoughtful choices about our climate.

Climate change presents unprecedented risks to our planet, ecosystems, and societies. The urgent need to address this crisis requires a multifaceted approach encompassing renewable energy adoption, international cooperation, and community engagement. By embracing these solutions, humanity can work towards a sustainable future, mitigating the worst impacts of climate change and ensuring the well-being of present and future generations.

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